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TITLE : ANTICORROSIVE CERAMIC MEMBER

ABSTRACT : PROBLEM TO BE SOLVED: To provide an anticorrosive ceramic member suitable for a plasma device by forming ceramic sintered products having main crystal phases containing specific elements such as MgO and grain boundary phases containing the specific elements, Cr, etc., at sites exposed on corrosive halogenic gases or plasma.

SOLUTION: This anticorrosive ceramic member used for the inner wall or tool of a plasma treating device, a radiation tube, etc., is produced by using ceramic sintered products having (A) main crystal phases comprising a compound containing one or more kinds of the groups 2a, 3a and 3b elements in the periodic table and (B) grain boundary phases consisting mainly of the groups 2a and 3a elements e.g. Ca, Co and Ni in the periodic table at sites exposed on corrosive halogenic gases or plasma. The component A concretely comprises a spinel sintered product such as MgO-Al₂O₃ sintered product or MgAl₂O₄, a YAG type sintered product such as Y₃Al₅O₁₂, etc. The component B comprises the same or better anticorrosive substance as or than the component A. In an embodiment, MgO is added to the Al₂O₃ system of the component A to produce MgAl₂O₄ in the component B.

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